Filing Date: September 28, 2005

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A compound having the structural formula IB or a pharmaceutically acceptable salt thereof,

$$X_3$$
 X_1 X_1 X_1 X_2 X_3 X_4 X_5 X_4 X_5 X_4 X_5 X_4

formula IB

wherein X₁, X₂, are -OMe; R₁ and R₂ are hydrogen, X₁, X₂, R₁ and R₂ are independently selected from the group consisting of exo, hydrogen, hydroxyl, exyalkyl, alkyl, alkenyl, alkynyl, alkyloxy, alkyloxyalkyl, alkylthioalkyl, alkoxycarbonyl, alkylthiocarbonyl, alkanoyl, cycloalkylalkyl, cycloalkylcarbonyl, cycloalkylalkanoyl, cycloalkylthiocarbonyl, cycloalkylalkoxycarbonyl, eveloalkylalkoxythiocarbonyl, cycloalkylthioalkyl, alkylcarbonyloxyalkyl, cycloalkylcarbonyloxyalkyl, silyloxyalkyl, aralkyl, arylalkenyl, arylcarbonyl, aryloxycarbonyl, arvithiocarbonyl, aralkoxycarbonyl, arvialkylthiocarbonyl, arvioxyalky, arvithioalkyl, haloalkyl, hydroxyalkyl, aralkanoyl, aroyl, aryloxycarbonylalkyl, aryloxyalkanoyl, carboxyl, alkenylcarbonyl. alkynylcarbonyl, Het¹, Het¹alkyl, Het¹oxyalkyl, Het¹aryl, Het¹aralkyl, Het¹cycloalkyl, Het¹alkoxycarbonyl, Het¹alkylthiocarbonyl, Het¹oxycarbonyl, Het¹thiocarbonyl, Het¹alkanoyl, Het¹aralkanoyl, Het¹aryloxyalkyl, Het¹alkyloxyalkyl, Het¹arylthioalkyl, Het¹aryloxycarbonyl, Het¹aralkoxycarbonyl, Het¹aroyl, Het¹oxyalkylcarbonyl, Het¹alkyloxyalkylcarbonyl, Het¹aryloxyalkylcarbonyl, Het¹carbonyloxyalkyl, Het¹alkylcarbonyloxyalkyl, Het² aralkylcarbonyloxyalkyl, Het² alkyl, Het² oxyalkyl, Het² alkyloxyalkyl, Het² aralkyl, Het² carbonyl, Het²oxycarbonyl. Het²thiocarbonyl. Het²alkanoyl. Het²alkvlthiocarbonyl. Het²alkoxycarbonyl. Het²aralkanoyl, Het²aralkoxycarbonyl, Het²aryloxycarbonyl, Het²aryloxyalkyl, Het²arylthioalkyl, Het²oxyalkylcarbonyl, Het²alkyloxyalkylcarbonyl, Het²aryloxyalkylcarbonyl, Het²carbonyloxyalkyl, Het²alkylcarbonyloxyalkyl, Het²aralkylcarbonyloxyalkyl, cyano, CR³=NR⁴, CR3=N(OR4), aminocarbonyl, aminoalkanoyl, aminoalkyl, unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, aralkyl, aryl, Het¹, Het², cycloalkyl, alkyloxy, alkyloxycarbonyl, carboxyl, aminocarbonyl, mono- or

Filing Date: September 28, 2005

di(alkyl)aminocarbonyl, aminosulfonyl, alkylS(=O), hydroxy, cyano, halogen or amino, unsubstituted, mono- or disubstituted, wherein the substituents are independently selected from the group consisting of alkyl, aryl, aralkyl, aryloxy, arylamino, arylthio, aryloxyalkyl, arylaminoalkyl, aralkoxy, alkylthio, alkoxy, aryloxyalkoxy, arylaminoalkoxy, aralkylamino, aryloxyalkylamino, arylaminoalkylamino, arylthioalkoxy, arylthioalkylamino, aralkylthio, aryloxyalkylthio, arylaminoalkylthio, arylthioalkylthio, alkylamino, cycloalkyl, cycloalkylalkyl, Het¹, Het², Het⁴alkyl, Het⁴amino, Het⁴amino, Het⁴alkylamino, Het⁴alkylamino, Het⁴thio, Het²thio, Het¹alkylthio, Het²alkylthio, Het¹oxy and Het²oxy, OR³, SR³, SO₂NR³R⁴, SO₂N(OH)R³, CN, CR3=NR4, S(O)R3, SO₂R3, CR3=N(OR4), N₃, NO₂, NR3R4, N(OH)R3, C(O)R3, C(S)R3, CO₂R³, C(O)SR³, C(O)NR³R⁴, C(S)NR³R⁴, C(O)N(OH)R⁴, C(S)N(OH)R³, NR³C(O)R⁴, NR³C(S)R⁴, N(OH)C(O)R⁴, N(OH)C(S)R³, NR³CO₂R⁴, NR³C(O)NR⁴R⁵, and NR³C(S)NR⁴R⁵, N(OH)CO₂R³, NR³C(O)SR⁴, N(OH)C(O)NR³R⁴, N(OH)C(S)NR³R⁴, NR³C(O)N(OH)R⁴, NR3C(S)N(OH)R4, NR3SO2R4, NHSO2NR3R4, NR3SO2NHR4, P(O)(OR3)(OR4), wherein t is an integer between 1 and 2 and R³, R⁴ and R⁵ are each independently selected from the group consisting of hydrogen, hydroxyl, alkyl, alkenyl, alkynyl, aminoalkyl, aminoaryl, alkylcarbonylamino, arylcarbonylamino alkylthiocarbonylamino and arylthiocarbonylamino;

wherein X_3 participates together with X_3 in an oxo functional group, or wherein X_3 is selected from the group consisting of hydrogen, hydroxyl, sulfur, oxyalkyl, oxycarbonyl, alkyl, Het¹alkyl, alkenyl, alkynyl, aminoalkyl, aminoacyl, alkylcarbonylamino, alkylthiocarbonylamino, Het¹, glycosyl, thio derivatives thereof, amino derivatives thereof, hydroxyl-protected derivatives thereof, alkyloxycarbonyl, unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, aralkyl, aryl, Het², cycloalkyl, alkyloxy, alkyloxycarbonyl, carboxyl and aminocarbonyl; and X₃ is selected from the group consisting of hydrogen, alkyl, aryl, Het¹, glycosyl, thio derivatives thereof, amino derivatives thereof, hydroxyl-protected derivatives thereof, aralkyl, and unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, aralkyl, aryl, Het¹. Het². cvcloalkvl, alkyloxy, alkyloxycarbonyl, carboxyl, aminocarbonyl, mono- or di(alkyl)aminocarbonyl, aminosulfonyl, alkylS(=O), hydroxy, cyano, halogen or amino, unsubstituted, mono- or disubstituted, wherein the substituents are independently selected from the group consisting of alkyl, aryl, aralkyl, aryloxy, arylamino, arylthio, aryloxyalkyl, arylaminoalkyl, aralkoxy, alkylthio, alkoxy, aryloxyalkoxy, aylaminoalkoxy, aralkylamino, aryloxyalkylamino, arylaminoalkylamino, arylthioalkoxy, arylthioalkylamino, aralkylthio, aryloxyalkylthio, arylaminoalkylthio, arylthioalkylthio, alkylamino, cycloalkyl and cycloalkylalkyl;

Filing Date: September 28, 2005

wherein X_4 and X_7 are independently selected from the group consisting of hydrogen, halogen, oxygen, oxo, carbonyl, thiocarbonyl, hydroxyl, alkyl, aryl, Het¹, glucosyl, fructosyl, galactosyl, mannosyl, ribosyl, ribulosyl, xylulosyl, erythrosyl, erythrulosyl, rhamnosyl, threosyl, sorbosyl, psicosyl, tagatosyl, fucosyl, arabinosyl, xylofuranosyl, xylopyranosyl, lyxosyl, talosyl, psicosyl, idosyl, gulosyl, altrosyl, allosyl, mannoheptulosyl, sedoheptulosyl, abequosyl, isomaltosyl, kojibiosyl, laminarabiosyl, nigerosyl, primeverosyl, rutinosyl, tyvelosyl, maltosyl, lactosyl, sucrosyl, cellobiosyl, trehalosyl, gentiobiosyl, melibiosyl, turanosyl, sophorosyl, isosucrosyl, raffinosyl, gentianosyl, 2-amino-2-deoxy glucosyl, 2-acetamido-2-deoxy-glucosyl, 2amino-2-deoxy galactosyl, 2-acetamido-2-deoxy-galactosyl, 2-amino-2-deoxy mannosyl, 2acetamido-2-deoxy-mannosyl, 2-amino-1,3-cyclohexanediol, L or D isomers thereof, α or β form thereof, pyranose or furanose form thereof, combination thereof, deoxy derivatives thereof, hydroxyl-protected acetate derivatives thereof, amino derivatives thereof, thio derivatives thereof, di-, tri-, oligo- and polysaccharide thereof; glycosyl, thio derivatives thereof, amino derivatives thereof, hydroxyl-protected derivatives thereof, Het¹alkyl, Het¹aryl, alkenyl, alkynyl, hydroxyalkyl, hydroxycarbonyl, hydroxycarbonylalkyl, hydroxycarbonylaryl, hydroxycarbonyloxyalkyl and hydroxycarbonyloxyaryl; aminocarbonyl, mono- or di(alkyl)aminocarbonyl, aminosulfonyl, alkylS(=O), hydroxy, aminoalkyl, aminoaryl, cyano, halogen or amino, unsubstituted, mono- or disubstituted, wherein the substituents are independently selected from the group consisting of alkyl, aryl, aralkyl, aryloxy, arylamino, arylthio, aryloxyalkyl, arylaminoalkyl, aralkoxy, alkylthio, alkoxy, aryloxyalkoxy, aylaminoalkoxy, aralkylamino, aryloxyalkylamino, arylaminoalkylamino, arylthioalkoxy, arylthioalkylamino, aralkylthio, aryloxyalkylthio, arylaminoalkylthio, arylthioalkylthio, alkylamino, Het¹, Het², alkyloxycarbonyl, carboxyl, aminocarbonyl, cycloalkyl and cycloalkylalkyl;

wherein X_5 participates in a double bond between the carbon atoms in position 4 and 5 or between carbon atoms in position 5 and 6, and X_6 is <u>hydrogen_independently selected from</u> the group consisting of hydrogen, hydroxyl and hydroxyalkyl, or wherein X_5 and X_6 are independently selected from the group consisting of halogen, hydrogen, hydroxyl, hydroxyalkyl, aminoalkyl, aminoaryl, unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, aralkyl, aryl, Het⁴, Het², cycloalkyl, alkyloxy, alkyloxycarbonyl, carboxyl, aminocarbonyl, and

wherein n is an integer between 0 and 10,

Filing Date: September 28, 2005

provided that when X_6 and X_4 are H, when X_5 participates in a double bond between the carbon atoms in position 5 and 6, when X_3 participates together with X_3 ' in an oxo functional group, when n is zero and R_1 and R_2 are H, X_7 is not hydroxyl.

2. (Cancelled)

3. (Currently amended) The compound according to claim 1,

wherein X_1 , X_2 , are -OMe; R_1 and R_2 are hydrogen, X_4 , X_2 , R_4 and R_2 are selected from the group consisting of hydrogen, hydroxyl, oxyalkyl, oxo, alkyl, alkenyl, alkynyl, alkyloxy, alkyloxyalkyl, alkylthioalkyl, alkoxycarbonyl, alkylthiocarbonyl, alkanoyl, cycloalkylalkoxycarbonyl, cycloalkylalkoxythiocarbonyl, cycloalkylalkoxythiocarbonyl, cycloalkylthioalkyl, alkylcarbonyloxyalkyl, cycloalkylalkoxythioalkyl, aryloxyalkyl, arylalkenyl, aryloxycarbonyl, aryloxycarbonyl, aryloxycarbonyl, aryloxycarbonyl, aryloxycarbonyl, aryloxyalkyl, aryloxyalk

wherein X₃ participates together with X₃' in an oxo functional group, or wherein X₃ is selected from the group consisting of hydrogen, hydroxyl, sulfur, oxyalkyl, oxycarbonyl alkyl, Het[†]alkyl, alkenyl, alkynyl, aminoalkyl, aminoacyl, alkylcarbonylamino, alkylthiocarbonylamino, Het¹, glucosyl, fructosyl, galactosyl, mannosyl, ribosyl, ribulosyl, xylulosyl, erythrosyl, erythrulosyl, rhamnosyl, threosyl, sorbosyl, psicosyl, tagatosyl, fucosyl, arabinosyl, xylofuranosyl, lyxosyl, talosyl, psicosyl, idosyl, gulosyl, altrosyl, allosyl, mannoheptulosyl, sedoheptulosyl, abequosyl, isomaltosyl, kojibiosyl, laminarabiosyl, nigerosyl, primeverosyl, rutinosyl, tyvelosyl, maltosyl, lactosyl, sucrosyl, cellobiosyl, trehalosyl, gentiobiosyl, melibiosyl, turanosyl, sophorosyl, isosucrosyl, raffinosyl, gentianosyl, 2-amino-2-deoxy glucosyl, 2acetamido-2-deoxy-glucosyl, 2-amino-2-deoxy-galactosyl, 2-acetamido-2-deoxy-galactosyl, 2amino-2-deoxy mannosyl, 2-acetamido-2-deoxy-mannosyl, 2-amino-1,3-cyclohexanediol, L or D isomers thereof, α or β form thereof, pyranose or furanose form thereof, combination thereof, deoxy derivatives thereof, hydroxyl-protected acetate derivatives thereof, amino derivatives thereof, thio derivatives thereof, disaccharide thereof, trisaccharide thereof, oligosaccharide and polysaccharide thereof, alkyloxycarbonyl unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, aralkyl, aryl, Het¹, Het², eycloalkyl, alkyloxy, alkyloxycarbonyl, carboxyl and aminocarbonyl; and X₃ is selected from the

Filing Date: September 28, 2005

group consisting of hydrogen, alkyl, aryl, aralkyl, Het 4 , glucosyl, fructosyl, galactosyl, mannosyl, ribosyl, ribulosyl, xylulosyl, erythrosyl, erythrulosyl, rhamnosyl, threosyl, sorbosyl, psicosyl, tagatosyl, fucosyl, arabinosyl, xylofuranosyl, lyxosyl, talosyl, psicosyl, idosyl, gulosyl, altrosyl, allosyl, mannoheptulosyl, sedoheptulosyl, abequosyl, isomaltosyl, kojibiosyl, laminarabiosyl, nigerosyl, primeverosyl, rutinosyl, tyvelosyl, maltosyl, lactosyl, sucrosyl, cellobiosyl, trehalosyl, gentiobiosyl, melibiosyl, turanosyl, sophorosyl, isosucrosyl, raffinosyl, gentianosyl, 2-amino-2-deoxy glucosyl, 2-acetamido-2-deoxy-galactosyl, 2-acetamido-2-deoxy-galactosyl, 2-amino-1,3-cyclohexanediol, L or D isomers thereof, α or β form thereof, pyranose or furanose form thereof, combination thereof, deoxy derivatives thereof, hydroxyl protected acetate derivatives thereof, amino derivatives thereof, thio derivatives thereof, disaccharide thereof, trisaccharide thereof, oligosaccharide and polysaccharide thereof;

wherein X_4 and X_7 are independently selected from the group consisting of hydrogen, exygen, oxo, earbenyl, thiocarbonyl, hydroxyl, alkyl, aryl, Het⁴, Het⁴alkyl, Het⁴aryl, alkenyl, alkynyl, hydroxyalkyl, hydroxycarbonyl, hydroxycarbonylalkyl, hydroxycarbonylaryl, hydroxycarbonylexyalkyl, glucosyl, fructosyl, galactosyl, mannosyl, ribosyl, ribulosyl, xylulosyl, erythrosyl, erythrulosyl, rhamnosyl, threosyl, sorbosyl, psicosyl, tagatosyl, fucosyl, arabinosyl, xylofuranosyl, lyxosyl, talosyl, psicosyl, idosyl, gulosyl, altrosyl, allosyl, mannoheptulosyl, sedoheptulosyl, abequosyl, isomaltosyl, kojibiosyl, laminarabiosyl, nigerosyl, primeverosyl, rutinosyl, tyvelosyl, maltosyl, lactosyl, sucrosyl, cellobiosyl, trehalosyl, gentiobiosyl, melibiosyl, turanosyl, sophorosyl, isosucrosyl, raffinosyl, gentianosyl, 2-amino-2-deoxy glucosyl, 2-acetamido-2-deoxy-glucosyl, 2-amino-2-deoxy galactosyl, 2-acetamido-2-deoxy-galactosyl, 2-amino-1,3-cyclohexanediol, L or D isomers thereof, α or β form thereof, pyranose or furanose form thereof, combinations thereof, deoxy derivatives thereof, hydroxyl-protected acetate derivatives thereof, amino derivatives thereof, thio derivatives thereof, disaccharide thereof, trisaccharide thereof, oligosaccharide and polysaccharide thereof;

wherein X_5 participates in a double bond between the carbon atoms in position 4 and 5 or between carbon atoms in positions 5 and 6, and X_6 is independently selected from the group consisting of hydroxyl, and hydroxyalkyl, or wherein X_5 and X_6 are independently selected from the group consisting of hydrogen, hydroxyl, hydroxyalkyl, aminoalkyl, aminoaryl, unsubstituted or substituted by one or more substituents independently selected from the group

Filing Date: September 28, 2005

consisting of alkyl, aralkyl, aryl, Het¹, Het², cycloalkyl, alkyloxy, alkyloxycarbonyl, carboxyl, aminocarbonyl, and

wherein n is an integer between 0 and 5.

4. (Withdrawn-Currently amended) The compound according to claim 1,

wherein X_1 , X_2 , are -OMe; R_1 and R_2 are hydrogen, X_4 , X_2 , R_4 and R_2 are selected from the group consisting of hydrogen, hydroxyl, alkyloxy, exo and exyalkyl,

wherein X₃ participates together with X₃' in an oxo functional group, or wherein X₃ is selected from the group consisting of hydrogen, hydroxyl, oxyalkyl, oxycarbonyl, glucosyl, fructosyl, galactosyl, mannosyl, ribosyl, ribulosyl, xylulosyl, erythrosyl, erythrulosyl, rhamnosyl, threosyl, sorbosyl, psicosyl, tagatosyl, fucosyl, arabinosyl, 2-amino-2-deoxy glucosyl, 2acetamido-2-deoxy-glucosyl, 2-amino-2-deoxy-galactosyl, 2-acetamido-2-deoxy-galactosyl, 2amino-2-deoxy-mannosyl, 2-acetamido-2-deoxy-mannosyl, L or D isomers thereof, α or β form thereof, pyranose or furanose form thereof, combination thereof, deoxy derivatives thereof, hydroxyl-protected acetate derivatives thereof, amino derivatives thereof, thio derivatives thereof, disaccharide thereof, trisaccharide thereof, oligosaccharide and polysaccharide thereof; and X'₂ is selected from the group consisting of alkyl, aryl and aralkyl, glucosyl, fructosyl, galactosyl, mannosyl, ribosyl, ribulosyl, xylulosyl, erythrosyl, erythrulosyl, rhamnosyl, threosyl, sorbosyl, psicosyl, tagatosyl, fucosyl, arabinosyl, 2-amino-2-deoxy glucosyl, 2acetamido-2-deoxy-glucosyl, 2-amino-2-deoxy-galactosyl, 2-acetamido-2-deoxy-galactosyl, 2amino 2 deoxy mannosyl, 2-acetamido 2 deoxy-mannosyl, L or D isomers thereof, α or β form thereof, pyranose or furanose form thereof, combinations thereof, deoxy derivatives thereof, hydroxyl-protected acetate derivatives thereof, amino derivatives thereof, thio derivatives thereof, disaccharide thereof, trisaccharide thereof, oligosaccharide and polysaccharide thereof;

wherein X_4 and X_7 are independently selected from the group consisting of hydrogen, exygen, oxo, hydroxyl, glucosyl, fructosyl, galactosyl, mannosyl, ribosyl, ribulosyl, xylulosyl, erythrosyl, erythrulosyl, rhamnosyl, threosyl, sorbosyl, psicosyl, tagatosyl, fucosyl, arabinosyl, 2-amino-2-deoxy glucosyl, 2-acetamido-2-deoxy-glucosyl, 2-amino-2-deoxy galactosyl, 2-acetamido-2-deoxy-mannosyl, L or D isomers thereof, α or β form thereof, pyranose or furanose form thereof, combination

Filing Date: September 28, 2005

thereof, deoxy derivatives thereof, hydroxyl-protected acetate derivatives thereof, amino derivatives thereof, thio derivatives thereof, disaccharide thereof, trisaccharide thereof, oligosaccharide and polysaccharide thereof;

wherein X_5 and X_6 are hydrogen or wherein X_5 participates in a double bond between the carbon atoms in position 4 and 5, and X_6 is hydrogen, and

wherein n is an integer between 0 and 2.

5. (Currently amended) The compound according to claim 1,

wherein X_1 , X_2 , X_3 , X_3 , X_6 , X_7 , R_1 , R_2 and n are selected from the group indicated in claim 1; and

wherein X_4 is equal to X_5 and is selected from the group consisting of halogen, aminoalkyl, aminoaryl, unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, aralkyl, aryl, Het^4 , Het^2 , cycloalkyl, alkyloxy, alkyloxycarbonyl, carboxyl and aminocarbonyl, or wherein X_5 participates in a double bond between the carbon atoms in position 5 and 6, and X_4 is independently selected from the group consisting of hydrogen, oxo, or hydroxylaminoalkyl, aminoaryl, unsubstituted or substituted by one or more substituents independently selected from the group consisting of alkyl, aralkyl, aryl, Het^4 , Het^2 , cycloalkyl, alkyloxy, alkyloxycarbonyl, carboxyl and aminocarbonyl.

6. (Withdrawn) The compound according to Claim 1, wherein X_1 and X_2 are -OMe, wherein R_1 and R_2 are -H, wherein X_4 is hydrogen, wherein X_3 participates together with X_3 ' in an oxo functional group, wherein X_5 participates in a double bond between the carbon atoms in position 4 and 5, wherein X_6 is hydrogen, wherein X_7 is hydroxyl, glucosyl, fructosyl, galactosyl, mannosyl, fucosyl, cellobiosyl, gentiobiosyl, 2-amino-2-deoxy glucosyl, 2-acetamido-2-deoxyglucosyl, 2-amino-2-deoxy galactosyl, disaccharide or trisaccharide thereof; and wherein n is 0.

7. (Withdrawn) The compound according to claim 1, wherein X_1 and X_2 are -OMe, wherein R_1 and R_2 are -H, wherein X_3 is hydrogen, hydroxyl, oxyalkyl or oxycarbonyl, wherein X_3 is glucosyl, fructosyl, galactosyl, mannosyl, fucosyl, cellobiosyl, gentiobiosyl, 2-amino-2-deoxy glucosyl, 2-acetamido-2-deoxy-glucosyl, 2-amino-2-deoxy galactosyl, 2-acetamido-2-deoxy-galactosyl, a disaccharide or a trisaccharide thereof, wherein X_4 is hydrogen, wherein X_5

Application No.: 1

10/538,993

Filing Date:

September 28, 2005

participates in a double bond between the carbon atoms in position 5 and 6, wherein X_6 is -H, wherein X_7 is hydrogen, oxygen, hydroxyl or oxo, and wherein n is 0.

8. (Withdrawn) The compound according to claim 1, wherein X_1 and X_2 are -OMe, wherein R_1 and R_2 are -H, wherein X_3 is glucosyl, fructosyl, galactosyl, mannosyl, fucosyl, cellobiosyl, gentiobiosyl, 2-amino-2-deoxy glucosyl, 2-acetamido-2-deoxy-glucosyl, 2-amino-2-deoxy galactosyl, 2-acetamido-2-deoxy-galactosyl, a disaccharide or a trisaccharide thereof, wherein X_3 is hydrogen, alkyl or aralkyl, wherein X_4 is hydrogen, wherein X_5 participates in a double bond between the carbon atoms in position 5 and 6, wherein X_6 is -H, wherein X_7 is hydrogen, oxygen, hydroxyl or oxo, and wherein n is 0.

9. (Withdrawn) The compound according to claim 1, wherein X_1 and X_2 are –OMe, wherein R_1 and R_2 are –H, wherein X_3 participates together with X_3 ' in an oxo functional group, wherein X_4 is hydroxyl, glucosyl, fructosyl, galactosyl, mannosyl, fucosyl, cellobiosyl, gentiobiosyl, 2-amino-2-deoxy glucosyl, 2-acetamido-2-deoxy-glucosyl, 2-amino-2-deoxy galactosyl, 2-acetamido-2-deoxy-galactosyl, a disaccharide or a trisaccharide thereof, wherein X_5 participates in a double bond between the carbon atoms in position 5 and 6, wherein X_6 is –H, wherein X_7 is hydrogen, oxygen, hydroxyl or oxo, and wherein n is 0.

10. (Cancelled)

11. (Withdrawn) A method for synthesizing a compound having the structural formula IB

$$X_3$$
 X_1 X_1 X_2 X_3 X_4 X_2 X_2 X_2 X_3 X_4 X_2 X_3 X_4 X_5 X_4 X_5 X_4

formula IB

wherein X_1 , X_2 , X_3 , X_4 , X_5 , X_6 , X_7 , R_1 , R_2 and n are selected from the group as indicated in claim 1, said method comprising the steps of

a) providing a starting material having the structural formula IV,

Filing Date: September 28, 2005

formula IV

wherein X_3 , X_3 ' and X_7 are selected from the group as indicated in claim 1, and wherein P is a protecting group,

b) effecting reaction between the compound of step a) with an organometallic compound having the structural formula V

$$R_1$$
 X_1
 X_2
 $(CH_2)n-W-Hall$

formula V

wherein X_1 , X_2 , R_1 , R_2 and n are selected from the group as indicated in claim 1, wherein W is a metal or a combination of metals and wherein Hal is a halogen atom,

to result in an intermediate having the structural formula III'B

$$X_3 X_3 X_3 X_1 = 0$$
 $P-X_7 X_2 X_2$

formula III'B

wherein X_1 , X_2 , X_3 , X_3 , X_7 , R_1 , R_2 and n are selected from the group as indicated in claim 1, and wherein p is a protecting group,

Filing Date: September 28, 2005

c) effecting reaction between the compound of step b) with an organometallic compound having the structural formula VI

Hal-W-X'3

formula VI

wherein X'_3 is selected from the group as indicated in claim 1, wherein W is a metal or a combination of metals, and wherein Hal is a halogen atom,

to result in an intermediate having the structural formula IIIB

$$X_3 X_3 X_1 X_1 X_1 X_2 X_2$$

formula IIIB

wherein X_1 , X_2 , X_3 , X_3 , X_7 , R_1 , R_2 and n are selected from the group as indicated in claim 1, wherein P is a protecting group,

d) deprotecting the X_7 group of the compound obtained in step c) to form an compound having the structural formula IIB

formula II B

wherein X₁, X₂, X₃, X₃, X₇, R₁, R₂ and n are selected from the group as indicated in claim 1, and

Filing Date: September 28, 2005

e) oxidizing by reaction with a suitable oxidizing agent or agents to from a compound of formula IB or

- e) coupling an O-protected glycosyl or non-protected glycosyl to form a compound of formula IIB wherein X_1 , X_2 , X_3 , X_7 , R_1 , R_2 and n are selected from the group as indicated in claim 1 and X_7 is an O-protected glycosyl or a non-protected glycosyl, and
- f) deprotecting the O-protected groups of glycosyl to form a compound of formula IB wherein X_1 , X_2 , X_3 , X'_3 , X_4 , X_5 , X_6 , R_1 , R_2 and n are selected from the group as indicated in claim 1, and X_7 is a glycosyl, thio derivatives thereof, amino derivatives thereof, or hydroxyl-protected derivatives thereof.
- 12. (Original) A compound obtainable by any of the steps according to the method of claim 11.
- 13. (Withdrawn-Currently amended) A compound designated as compound UBS1664

- 14. (Cancelled)
- 15. (Withdrawn-currently amended) A compound designated as compound UBS3328.

UBS3328.

16. (Cancelled)

Application No.:

10/538,993

Filing Date:

September 28, 2005

17. (Cancelled)

18. (Previously presented) A pharmaceutical composition comprising a pharmaceutically

acceptable excipient and a therapeutically effective amount of a compound according to Claim

1.

19. (Cancelled)

20. (Withdrawn) Method of treating cancer comprising administrating to an individual in need of

such treatment a pharmaceutical composition according to claim 18.

21. (Previously presented) A pharmaceutical composition comprising a pharmaceutically

acceptable excipient and a therapeutically effective amount of a compound prepared by the

method of Claim 12.

22. (Withdrawn) A method of treating cancer comprising administrating to an individual in need of such

treatment a pharmaceutical composition according to claim 21.

-13-